



# TG - RF Systems Committ

---

## STANDARDS and PUBLICATIONS INITIATIVES Ronald Pozmantier, RF Systems Committee Chair

23-OCT-2002



# TG - RF Systems Committ

- **Writes standards and test methods for Radio Frequency telemetry systems (receive/transmit)**
- **The RF Systems Committee is responsible for:**
  - IRIG Standard 106 Part I, Telemetry Standards**
    - Chapter 2 - Transmitter and Receiver Systems
    - Appendix A - Frequency Considerations for Telemetry
  - RCC-118, Test Methods for Telemetry Systems and Subsystems**
    - Volume II: Test Methods for Telemetry RF Subsystems
    - Volume I: Test Methods for Vehicular Instrumentation Systems, Chapter 5 - Test Procedures for Telemetry Transmitters



# **TG - RF Systems Committ**

---

## **RCC-120, Telemetry Systems Radio Frequency (RF) Handbook**



# TG - RF Systems Committ

## MEMBERSHIP

- **Ronald Pozmantier, Committee Chair**
- **Current Members:**

Ronald Pozmantier, AFFTC  
Donald Whiteman, NASA DRYDEN  
Moises Pedroza, WSMR-NR-DT  
Bob Selbrede, AFFTC-CSC ARTM  
Richard Rood, NASA DRYDEN  
Darryl Burkes, NASA DRYDEN  
Jim Briggs, AFFTC (ARTM)  
Robert Given, YPG  
Ken Meeker, NWAS Corona  
Tam, Tran, PMRF



# TG - RF Systems Committ

---

## RECENTLY COMPLETED WORK

### Updated Test Methods

RCC Document 118 Vol. II and ('97) and Vol. I, Chapter 5 ('98) Added a block diagram and tied procedures to same. Added feed assembly and tracking system tests; updated transmitter tests; Volume II updated for FQPSK demod tests Feb 02

### Updated IRIG 106 Chapter 2 and Appendix A

('99) Added FQPSK to the standards



# TG - RF Systems Committ

## Recently Completed Tasks

### TG-51

Provided a new handbook: RF Systems (a canceled former task: Vehicular RF Systems Handbook)

- This is a work in progress
- First edition will be improved upon in subsequent updates
- Intent was to include as many “real” examples as possible. Next update will add these.



# TG - RF Systems Committ

---

## CURRENT TASKS

### TG -58

Update Test Methods (RCC 118 Vol. I, Chapter 5, and Vol. II) for bandwidth efficient modulation (FQPSK-B rev A1)

Transmitter test methods (Vol. I, Chapter 5).

Draft test methods complete.

Draft test methods (Draft 1) complete.



# TG - RF Systems Committ

## RCC-118 Updates, Status

TG-58 MILESTONES	2000				2001				2002				2003			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Task Approval and Assignment		▲														
Review ARTM procedures			▲				▲									
Prepare Draft				▲				▲								
Review Draft								▲		△						
Distribute Pink Sheets										△						
Review Pink Sheet Responses										△	△					
Committee Review											△					
Finalize Document											△	△				
Document To Secretariat												△				





# TG - RF Systems Committ

---

## CURRENT TASKS

### TG-60

Update RCC Document 119-88;  
Telemetry Applications Handbook

Recent Progress: Decided that new sections will be added on quadrature modulation, FQPSK-B, adjacent channel interference performance, and telemetry channel characteristics.

[illegible]



# TG - RF Systems Committ

---

## TG-65

Revise IRIG-106, Part 1, Chapter 2 and Appendix A for advanced bandwidth efficient modulation methods.

## TG-66

Update of RCC 118, Volume 2 and Chapter 5, Volume 1 for advanced bandwidth efficient modulation methods.

## TG-67

Revise RCC-120, Telemetry Systems Radio Frequency (RF) Handbook





<b>TG-66 MILESTONES</b>	2002				2003				2004				2005			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Task Approval and Assignment																
Investigate methods																
Prepare Draft																
Review Draft																
Distribute Pink Sheets																
Review Pink Sheet Responses																
Committee Review																
Finalize Document																
Document To Secretariat																

## TG-67 Milestone Chart

TG-67 MILESTONES	2002				2003				2004				2005			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Task Approval and Assignment		▲														
Develop Candidate Updates			▲		△											
Prepare Drafts			▲		△											
Review Drafts					△		△									
Prepare Pink Sheets								△	△							
Publish Pink Sheets								△								
Review Pink Sheet Responses									△							
Comm Review and Finalize												△	△			
Document to Secretariat													△			



# TG - RF Systems Committ

## FUTURE TASKS

### Update Test Methods (RCC-118) for:

Tests associated with new  
equipment for new  
modulation schemes

Methods employing more  
capable modern test



# TG - RF Systems Committ

---

Update RCC 118 RF sections (Vol. II; Vol. I, chapt. 5) - Modernize the procedures to use state-of-the-art test equipment

- Committee felt that such an update would leave many users without procedures that worked with their legacy test equipment.
- The benefits of using new test equipment would affect the quality, type and amount of data measured and recorded. Ability to measure dynamic response would be enhanced. Automation of procedures would be easier.
- Might mean a change to the introduction of the volumes rather than a procedure by procedure update, since procedures are not written to specific equipment





# TG - RF Systems Committ

Your inputs are solicited and welcome for this handbook. Please call, we need your inputs

Please Contact: Ron Pozmantier

- 411FLTS/TS

385 N. Flightline Rd.

Edwards AFB, CA 93524-6030

- Phone: (805) 277-5326; Fax: (661) 275-4761

- e-mail:

[ron.pozmantier@f22ctf.edwards.af.mil](mailto:ron.pozmantier@f22ctf.edwards.af.mil)

- Or Committee Members